

The Croonian Lecture for 1826. By Sir Everard Home, Bart. V.P.R.S.
Read November 16, 1826. [*Phil. Trans.* 1827, p. 39.]

The author states the subject of this lecture to be, "an inquiry into the mode by which the propagation of the species is carried on in the common oyster, and the large fresh-water muscle."

After noticing the agreement of these animals, in the circumstance of their ova becoming the nuclei on which pearls are formed, he observes that they disagree in the process gone through before the young is completely formed. The mode of propagation of the oyster he regards as more simple than that of many plants; and the processes, as gone through in much shorter time.

In describing the mode of breeding of the oyster, the author first observes that we labour under considerable disadvantage in the inquiry in this country, from the prohibition of their sale during the spawning season; from which, however, he was relieved by a weekly supply of oysters from a private bed.

He first describes the two ovaria, which he states to lie immediately within the membrane that lines the two shells, having the liver between them, whose structure resembles so closely that of the ovarium containing ova, as only to be distinguished by their colour and situation. In March, the ova were large enough to be visible in the field of a microscope, and were spherical; as they enlarge, that membrane to which they are attached becomes thickened. In June, they have attained their full size, and are seen surrounded by a white liquor, which the author regards as impregnating fluid. At the time of their detachment a tube is seen, not to be detected before, originating by an opening between the two ovaria. This is the oviduct; and the embryo, when it enters it, has already acquired a shell. About the end of June, the young begin to leave the ovaria, and at the end of July none are found, either in them or in the oviduct.

The author then observes, that the oyster seems to form an exception to the general rule observed by other fish,—being out of season, and having no flavour during the time that the ovaria are full of ova. In fact, however, the breeding season of oysters, when the ova are getting ready for impregnation, is March or April; while in June or July they may be said to have spawned, the embryo being then received into the mouth of the oviduct.

In the fresh-water muscle the ovaria resemble, in situation and appearance, those of the oyster; and the ovaria are the same size before impregnation, which in them also happens in the ovarium. They are completely formed about the 10th of August, and about the 20th are detected passing into the oviduct; and about the 12th of September have all arrived there. That they are previously impregnated is evident from the ovum having been formed into a vesicle, through which the embryo may be seen opening and shutting its shells. The author here notices a curious phenomenon, many of the young being seen in this state, turning round and round as on a centre. Mr. Bauer ascertained that this motion is produced by a

worm, which gets into the vesicle, and performs these revolutions while feeding on the young muscle, carrying it round with it, though itself invisible.

The young remain in the oviduct, which is like a honey-comb, till they arrive at the size fitting them to provide for themselves; and leave it in October and November; and when ready to leave it a canal is formed, through which they pass out,—an operation facilitated by the motion of the foot of the parent, which is partly surrounded by the oviduct.

On a newly discovered Genus of Serpentine Fishes. By I. Harwood, M.D. F.L.S. Professor of Natural History in the Royal Institution of Great Britain. Communicated by Daniel Moore, Esq. F.R.S. Read February 1, 1827. [*Phil. Trans.* 1827, p. 49.]

Dr. Harwood begins this paper by observing, that in no department of natural history have descriptions been more unsatisfactory than such as relate to certain productions of the ocean, which, from the immeasurable depths which conceal them, and absence of the circumstances best adapted to their multiplication, very rarely present themselves to our notice. It is to this rarity of opportunities for exact examination that we are to attribute the wonderful accounts of sea-monsters, which have from time to time appeared, such as the Kraken, the Sea Serpent, &c.

The author, after this preface, proceeds to describe a very extraordinary marine animal, taken by Captain Sawyer, of the ship *Harmony*, which was in pursuit of the bottle-nosed porpoise, in lat. 62° N., and 57° W. long. He observed a body floating on the water, which he at first took for an inflated seal-skin, but on a nearer approach it proved to be a living animal. Exhausted by unavailing efforts to gorge a fish, seven inches in circumference, it allowed itself to be taken, and was preserved by Captain Sawyer in rum. On a cursory view it might be taken for an extraordinary kind of sea-serpent, and this idea would be even supported by a closer examination of parts of its structure.

It offers points of discrepancy, however, from the several genera of animals nearer allied to it, so important as to entitle it to a distinct place in classification, especially as regards the jaws, which, with the exception of the apparent want of interarticular bones, are truly serpentiform, and from the possession of an enormous elastic sac, which is seemingly a receptacle for air only. The first of these characters seeming to the author least liable to vary, he suggests the term *Ophiognathus* as applicable to the genus.

He then proceeds to give a technical zoological description of the genus, and to state the points in which it essentially differs from the genera nearer allied to it, after which he gives a more special description.

Its body is of a uniform purplish black, except the filamentous extremity of the tail, which is much lighter. Its total length 4 feet